REVIEW ARTICLES AND TEXTBOOKS

Department of Theoretical Studies

- **Z. SIANINA, K. KOBAYAHI and S. NAGASE**, "Gibbs Energy Treatment of Ca@C₇₄, Ca@C₈₂, and La@C₈₂," in *Fullerenes and Nanotubes: Materials for the New Chemical Frontier*, P. V. Kamat, D. M. Guldi, F. D'Souza and S. Fukuzumi, Eds., The Electrochemical Society; Pennington, **14**, pp. 71–83 (2004).
- **Z. SLANINA, F. UHLIK, O. V. BOLTALINA, K. KOBAYASHI and S. NAGASE**, "Computations of New Observations for $C_{60}F_{36}$ and $C_{60}H_{36}$," in *Fullerenes and Nanotubes: Materials for the New Chemical Frontier*, P. V. Kamat, D. M. Guldi, F. D'Souza and S. Fukuzumi, Eds., The Electrochemical Society; Pennington, **14**, pp. 94–102 (2004).
- **Z. SLANINA, F. UHLIK, L. ADAMOWICZ, K. KOBAYASHI and S. NAGASE**, "Excited Electronic States and Relative Stabilities of C₈₀ Isomers," in *Fullerenes and Nanotubes: Materials for the New Chemical Frontier*, P. V. Kamat, D. M. Guldi, F. D'Souza and S. Fukuzumi, Eds., The Electrochemical Society; Pennington, **14**, pp. 168–177 (2004).
- **Z. SLANINA and S. NAGASE**, "Computing Encapsulation of Non-Metallic Molecules," in *NANOTECH 2005—Technical Proceedings of the 2005 NSTI Nanotechnology Conference and Trade Show*, NanoScience and Technology Institute; Cambridge, 2005, pp. 222–225 (2005).
- **Z. SLANINA and S. NAGASE**, "Computational Chemistry of Isomeric Fullerenes and Endofullerenes," in *Theory and Application of Computational Chemistry: The First Forty Years*, C. E. Dykstra, G. Frenking, K. S. Kim and G. E. Scuseria, Eds., Elsevier; Amsterdam, Chapter 32, pp. 891–917 (2005).
- Y. TANIMURA, H. SATO, T. YODA, R. AKIYAMA, S. FUJIWARA and H. OKUMURA, (translation), P.R. BERGETHON, *The Physical Basis of Biochemistry: The Foundations of Molecular Biophysics*, (translation into Japanese), Springer-Verlag; Tokyo (2004).
- **Y. OKAMOTO and S. TAKADA**, "Approaching Protein Tertiary Structure Prediction Problem from Protein Folding Simulations," in *Special Series: Water and Biomolecules* (in Japanese), *Modern Chemistry* (GENDAI KAGAKU), No. **408**, 47–53 (2005).
- C. ZHU, G. V. MIL'NIKOV and H. NAKAMURA, "Semiclassical Theory of Nonadiabatic Transition and Tunneling," in *Modern Trends in Chemicla Reaction Dynamics*, X. Yang and K. Liu, Eds., World Scientific; Singapore, Chap 10 (2004).
- **H. NAKAMURA**, "Nonadiabatic Transition—An Origin of Mutability of This World," in *Nonadiabatic Transition in Quantum Systems*, V. I. Osherov and L. I. Ponomarev, Eds., Institute of Problems of Chemical Physics, Russian Academy of Sciences; Chernogolovka, pp. 12–36 (2004).
- V. I. OSHEROV, V. G. USHAKOV and H. NAKAMURA, "Nonadiabatic Transition—between Asymptotically Degenerate States," in *Theory of Chemical Reaction Dynamics*, A. Lagana and G. Lendvay, Eds., Kluwer Academic Publisher, pp. 105–127 (2004).
- H. NAKAMURA, Chemical Reaction Dynamics (in Japanese), Asakura Publ. Co.; Tokyo (2004).

Department of Molecular Structure

K. IMURA, T. NAGAHARA and H. OKAMOTO, "Plasmon-Mode Imaging and Dynamics of Gold Nanorods," *OYO BUTURI* (in Japanese) **74**, 492–496 (2005).

Department of Electronic Structure

K. OHMORI, "Coherent Control with Attosecond Precision Applied to Vibrational Wave-Packets in Molecules," *BUTSURI* (the monthly membership journal of the Physical Society of Japan) (in Japanese) **59**, 615 (4 pages) (2004).

Department of Molecular Assemblies

- **A. KOBAYASHI, E. FUJIWARA and H. KOBAYASHI**, "Single-Component Molecular Metals with Extended-TTF Dithiolate Ligands," *Chem. Rev.* **104**, 5243–5264 (2004).
- **H. KOBAYASHI**, **H. CUI and A. KOBAYASHI**, "Organic Metals and Superconductors Based on BETS (BETS = bis(ethylenedithio)tetraselena-fulvalene)," *Chem. Rev.* **104**, 5265–5288 (2004).

- T. ENOKI, M. AIMATSU, H. YAMAZAKI, K. OKABE, J. NISHIJO, K. ENOMOTO, A. MIYAZAKI, K. UGAWA, E. OGURA, Y. KUWATANI, M. IYODA, O. NAUMENKO and Y. V. SUSHKO, "Unconventional Properties of TTF-Based Organic Magnetic Conductors, Organic Conductors, Superconductors and Magnets: From Synthsis to Molecular Electronics," in *NATO Science Series II*, Lahcène Ouahab and Edward Yagubskii, Eds., Kluwer Academic Publishers; Dondrecht/Boston/London, 139, 113–126 (2004).
- **T. ENOKI**, "Intercalation and Guest-Host Interaction in Nano-Graphite," *J. Phys. Chem. Solids* **65**, 103–108 (2004).
- **L. OUAHAB and T. ENOK**i, "Multiproperty Molecular Materials: TTF-Based Conducting and Magnetic Molecular Materials," *Eur. J. Inorg. Chem.* 933–941 (2004).
- T. ENOKI and A. MIYAZAKi, "Magnetic TTF-Based Charge Transfer Complexes," *Chem. Rev.* 104, 5449–5477 (2004).
- **T. NAITO**, "Can Light Convert Molecular Material into Molecular Devices?" *Chemistry and Chemical Industry* (in Japanese), The Chemical Society of Japan, **58**, 227–228 (2005).
- **K. MIYAGAWA, K. KANODA and A. KAWAMOTO**, "NMR Studies on Two-Dimensional Molecular Conductors and Superconductors: Mott Transition in κ-(BEDT-TTF)₂X," *Chem. Rev.* **104**, 5635–5653 (2004).

Department of Applied Molecular Science

D. -L. JIANG, "Molecular Design of Light-Harvesting Antennae," in *Dendritic Polymers* (in Japanese), NTS; Tokyo (2005).

Department of Vacuum UV Photoscience

J. ADACHI, N. KOSUGI and A. YAGISHITA, "Symmetry-Resolved Soft X-Ray Absorption Spectroscopy: Its Application to Simple Molecules," *J. Phys. B: At., Mol. Opt. Phys.* **38**, R127–R152 (2005).

Coordination Chemistry Laboratories

- **H. KAWAGUCHI and T. MATSUO**, "Aryloxide-Based Multidentate Ligands for Early Transition Metals and f-Element Metals," *J. Organomet. Chem.* **689**, 4228–4243 (2004). (special issue "40th Anniversary of J. Organomet. Chem.")
- **K. MASHIMA**, "Ligand Architecture on Stereocontrol of Half-Metallocene Benzylidene Complexes of Niobium and Tantalum," *Advanced Synthesis & Catalysis* (special issue dedicated to Professor R. Schrock) **47**, 323–328 (2005)
- **A. NAKAMURA and K. MASHIMA**, "Diene Complexes of Early Transition Metals: Ideas and Progresses at Osaka University," *J. Organomet. Chem.* **689**, 4552–4563 (2004). (special issue "40th Anniversary of J. Organomet. Chem.")
- **K. MASHIMA**, "Catalytic and Stoichiometric Reactions by Half-Metallocene Diene Complexes of Niobium and Tantalum," *J. Synth. Org. Chem. Jpn.* **62**, 1166–1171 (2004).

Research Center for Molecular-scale Nanoscience

- T. OGAWA, "Electrical Conductance of Single Molecules," Surface Science (in Japanese) 25, 732–737 (2004).
- **T. OGAWA**, "Recent Trend in the Studies of Single Molecular Conductance," *Chemistry* (in Japanese) **60**, 72–73 (2005).
- **T. OGAWA**, "Single Molecular Device," in *The Fifth Series of Experimental Chemistry* (in Japanese), Maruzen: Tokyo, **28**, pp. 179–197 (2005).
- Y. UOZUMI, "Recent Progress in Polymeric Palladium Catalysts for Organic Synthesis," *Top. Curr. Chem.* 242, 77–112 (2004).
- H. ADACHI, H. UNO, A. KAMIMURA, S. KAWABATA, M. KURAMOTO, S. SHINODA, H. TSUKUBE, T. NAGATA, Y. NISHIGAICHI, K. MITSUKURA, Y. MORIMOTO and H. YAMADA, First Step in Organic Spectroscopic Analysis, H. Uno and H. Tsukube, Eds, Maruzen; Japan (in Japanese) (2004).
- **T. HIRAO and H. SAKURAI**, "Synthesis of Sumanene, a Bowl-Shaped Conjugated Compound," *Chemistry and Chemical Industry* (in Japanese) **57**, 954–956 (2004).

- Y. MATSUMOTO, "Surface Dynamics Studied by Time-Resolved Nonlinear Spectroscopy," Rev. Laser Engineering (in Japanese) 32, 694–700 (2004).
- Y. MATSUMOTO, "Dynamic Formation of Surface Reaction Sites by Structural Fluctuations," Shokubai (in Japanese) 46, 558–563 (2004).
- Y. KAMIYA, Y. YAMAGUCHI and K. KATO, "NMR for Structural Glycobiology," in Tousa Kagaku No Shintenkai (in Japanese), N. Taniguchi and Y. Ito, Eds., NTS; Tokyo, pp. 76-83 (2005).
- M. C. COPLAN, R. W. VAN BOEYEN, J. H. MOORE, J. P. DOERING, J. W. COOPER and N. WATANABE, "Identification of Double Ionization Mechanisms, Results Bearing on Electron Correlation Measurements," in Electron and Photon Impact Ionization and Related Topics 2004, B. Piraux, Ed., Inst. Phys. Conf. Ser. No. 183, Institute of Physics; Bristol and Philadelphia (2004).
- M. TAKAHASHI, T. SAITO and Y. UDAGAWA, "An Investigation of the Two Outermost Orbitals of Glyoxal and Biacetyl by Electron Momentum Spectroscopy," in Electron Scattering from Atoms, Molecules, Nuclei and Bulk Matter, C. T. Whelan and N. J. Mason, Eds., Kluwer Academic/Plenum Publishers; New York (2005).
- M. TAKAHASHI, "Some Recent Highlights of Electron-Molecule Collision Studies," *Parity* (in Japanese) 20, 6–8 (2005).
- M. TAKAHASHI, "Detection of Charged Particles," The Fifth Series of Experimental Chemistry (in Japanese), Maruzen: Tokyo, 10, pp. 315–320 (2005).

Okazaki Institute for Integrative Bioscience

- S. AONO, "Regulation of Biological Function by Carbon Monoxide," Chemistry & Education (in Japanese) 381, 132-135 (2005).
- B. PAL and T. KITAGAWA, "Interactions of Soluble Guanylate Cyclase with Diatomics as Probed by Resonance Raman Spectroscopy," *J. Inorg. Biochem.* **99**, 267–279 (2005). **T. UCHIDA and T. KITAGAWA**, "Mechanism for Transduction of the Ligand-Binding Signal in Heme-Based
- Gas Sensory Proteins Reavealed by Resonance Raman Spectroscopy," Acc. Chem. Res. 38, 662–670 (2005).
- T. OHTA and T. KITAGAWA, "Resonance Raman Investigation on the Specific Sensing Mechanism of a Target Molecule by Gas Sensory Proteins," Inorg. Chem. 44, 758–769 (2005).